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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,749	01/22/2001	Conal O'Neill		1254

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EXAMINER	
CHEN, TIANJIE	

ART UNIT	PAPER NUMBER
2652	

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/766,749	O'NEILL, CONAL	
	Examiner	Art Unit	
	Tianjie Chen	2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 20-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15,20-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Final Rejection

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

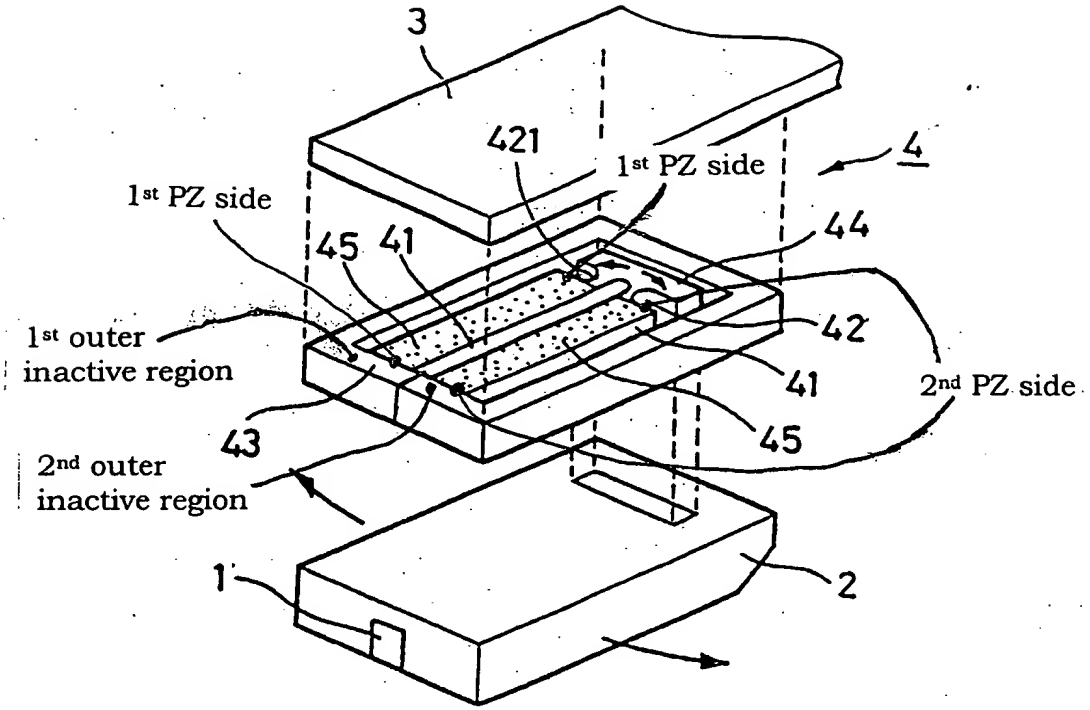
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-15 and 20-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Soeno et al (US 6,246,552).

With regard to claims 1-3 and 8-10, Soeno et al shows a disc drive actuation system for precisely positioning a read/write head over a selected track of a rotatable disc (Figs. 18, 19 and 32), the system including: A) a flexure (means) 31 (Column 27, line 41), B) a slider (means) 2 (Column 13, line 44), C) a read/write head 1 firmly attached to the slider, D) a first drive unit (means) 5 (Fig. 32, column 1, line 55) for pivoting the flexure to position the read/write head (means) approximately over the selected track, which is a voice coil motor, E) a microactuator 4 (Figs. 18 and 3) including: 1) an inner inactive region 44, 2) a first outer inactive region (See attached Fig. 3 with added numerals in next page) a second outer inactive region (See attached Fig. 3), 4) a first piezoelectric section (left of 45) sandwiched between the first outer inactive region and the inner inactive region, 5) a second piezoelectric section (right of

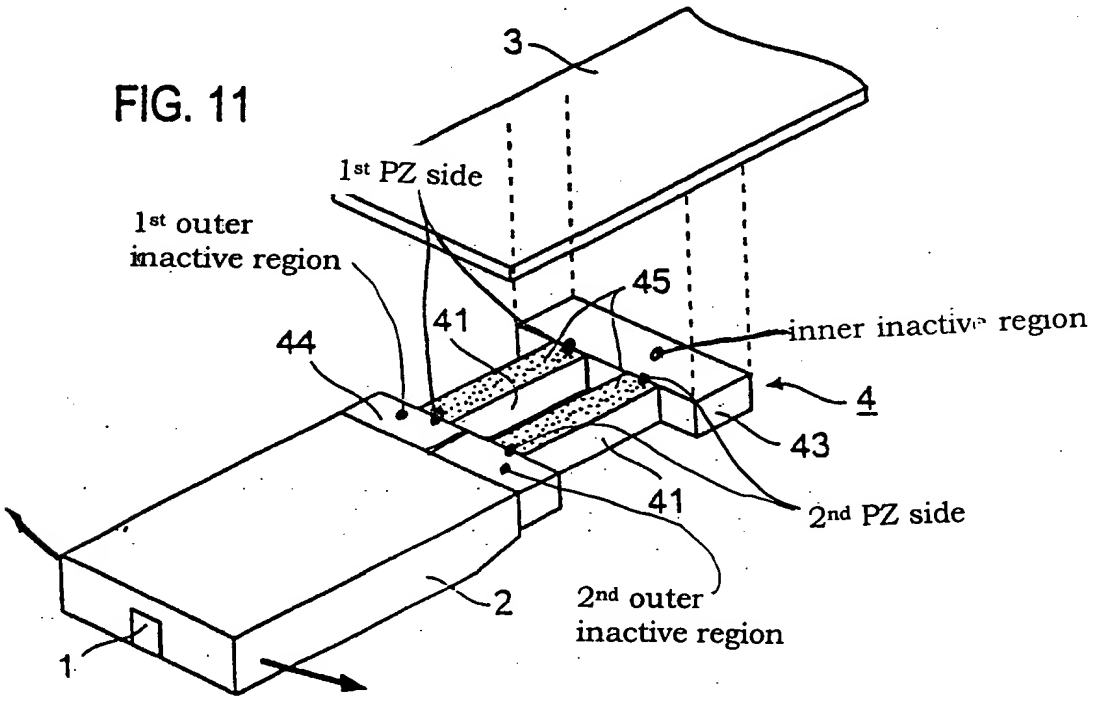
FIG. 3



45) sandwiched between the second outer inactive region and the inner inactive region, wherein the inner inactive region is firmly attached to the slider (means) and both of the outer inactive regions being firmly attached to the flexure (means) (Column 6, lines 35-37), 6) an inherent electrical circuit for energizing the first and the second piezoelectric sections to cause them to expand and contract in order to precisely position the read/write head (means) over the selected track (Column 34,, lines 44-57), the circuit and the piezoelectric sections being configured such that the first piezoelectric section expands when the second piezoelectric section contracts and the first piezoelectric section contracts when the second piezoelectric section expands, which is shown in Fig. 3, wherein the above mentioned action causes the slider on 44 to rotate as shown in Fig. 3.

With regard to claims 4/1, 11/8, and 15; Soeno et al shows a disc drive actuation system for precisely positioning a read/write head over a selected track of a rotatable disc (Figs. 18, 19 and 32), the system including: A) a flexure (means) 31 (Column 27, line 41), B) a slider (means) 2 (Column 13, line 44), C) a read/write head 1 firmly attached to the slider, D) a first drive unit (means) 5 (Fig. 32, column 1, line 55) for pivoting the flexure to position the read/write head (means) approximately over the selected track, E) a microactuator 4 (Figs. 18 and 11) including: 1) an inner inactive region 43 (Fig. 11) a first outer inactive region (See attached Fig. 11 with added numerals in next page) a second outer inactive region (See attached Fig. 11),

FIG. 11



4) a first piezoelectric section (left of 45) sandwiched between the first outer inactive region and the inner inactive region, 5) a second piezoelectric section (right of 45) sandwiched between the second outer inactive region and the inner inactive region, wherein the inner inactive region is firmly attached to the flexture (means) and both of

the outer inactive regions being firmly attached to the slider (means), 6) an inherent electrical circuit for energizing the first and the second piezoelectric sections to cause them to expand and contract in order to precisely position the read/write head (means) over the selected track (Column 34,, lines 44-57), the circuit and the piezoelectric sections being configured such that the first piezoelectric section expands when the second piezoelectric section contracts and the first piezoelectric section contracts when the second piezoelectric section expands, which is shown in Fig. 11, wherein the above mentioned action causes the slider on 44 to rotate as shown in Fig. 11.

With regard to claim 15, Soeno et al further shows the slide is independently supported by the microactuator (Fig. 11).

With regard to claims 5, 12, and 20; Soeno et al further shows a flex circuit 33 (Fig. 21, column 28, line 27) for providing electrical connections to the read/write head and the microactuator.

With regard to claims 6, 13, and 21; Soeno et al further shows that the disc drive actuation system is a magnetic disc drive actuation system (Column 6, lines 24-26).

With regard to claims 7, 14, and 22 Soeno et al further shows that the disc drive actuation system is an optical disc drive actuation system (Column 6, lines 24-26).

With regard to claims 23, 24, and 25; Soeno et al further shows the first piezoelectric section includes two first piezoelectric sides, wherein both of the first piezoelectric sides are opposite to each other (See attached Fig. 3), and wherein the second piezoelectric section includes two second piezoelectric sides (See attached Fig.

3), wherein both of the second piezoelectric sides are opposite to each other, wherein one of the two first piezoelectric sides is rigidly attached to the first outer inactive region and wherein the other of the two first piezoelectric sides is rigidly attached to the inner inactive region, and wherein one of the two second piezoelectric sides is rigidly attached to the second outer inactive region and wherein the other of the two second piezoelectric sides is rigidly attached to the inner inactive region.

Response to Arguments

2. Applicant's arguments filed 07/17/2003 have been fully considered but they are not persuasive.

- Applicant asserts that using "sandwiched' to replace the term "mounted" in claims 1 and 8 would overcome the rejection.
- Examiner found that the terms "first outer inactive region" and "second outer inactive region" were not carefully defined in claims 1 and 8. A modification on defining the regions in the prior art as shown in the attached Fig. 3 would make the prior art read the amended claims 1 and 8 well.
- Rejection on claims 1 and 8 maintains.

Conclusion

3. In Applicant's amendment, in independent claims 1 and 8, the limitation "mounted" has been replaced by "sandwiched"; and in independent claim 15, a new element "an inner active region" has been added. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-6037 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Chen Tianjie

Tianjie Chen
Examiner
Art Unit 2652

July 25, 2003